CLAIMS

What is claimed is:

1. A search method comprising:

   a) accepting search intent information from a user having a search intent;

   b) creating a semantic taxonomy tree having at least one term representative of said search intent information;

   c) augmenting said at least one term with at least one associated concept derived from at least one of said at least one term using existing terminological data;

   d) associating a weight with at least one of said at least one term;

   e) obtaining user preference intent for at least one relevance value;

   f) determining at least one root term for said at least one term;

   g) transforming said semantic taxonomy tree to at least one Boolean search query;

   h) submitting at least one of said at least one Boolean search query to at least one searcher;

   i) receiving at least one search result from said at least one searcher;

   j) interpreting said at least one search result;

   k) requesting at least one page specified by said at least one search result;

   l) receiving at least one retrieved page;

   m) generating ranked results by ranking said at least one retrieved page by applying at least one of said at least one relevance value and said search intent information to said at least one retrieved page;

   n) presenting said ranked results to said user;

o) presenting said semantic taxonomy tree to said user;

p) accepting user feedback from said user; said user feedback indicating how well said search results addressed said search intent; and

q) using said user feedback to update said user preference intent for said at least one relevance value.

2. A search method according to claim 1, wherein each term has an associated weighting factor.

3. A search method according to claim 1, wherein at least one of said at least one associated concept includes at least one synonymous concept.

4. A search method according to claim 1, wherein at least one of said at least one associated concept includes at least one antonymous concept.

5. A search method according to claim 1, wherein said at least one relevance value includes at least one of the following:

a) a composite component;

b) a semantic component;

c) a categorical match component;

d) a search engine component;

e) an authority/hub component; and

f) a popularity component.

6. A search method according to claim 1, wherein said at least one relevance value includes all of the following:

   a) a composite component;

   b) a semantic component;

   c) a categorical match component;

   d) a search engine component; and

   e) a popularity component.

7. A search method according to claim 1, wherein said step of presenting said semantic taxonomy tree to said user further includes the step of expanding or narrowing the presentation by said user clicking on nodes of said taxonomy tree.

8. A search method according to claim 1, wherein said at least one Boolean search query is formatted specifically for a preselected searcher.

9. A search method according to claim 1, wherein said page includes at least one of the following:

   a) a web page;

   b) a document;

   c) an image;

   d) an XML document;

   e) a semantic web document; and

f) data.

10. A search method according to claim 1, wherein said step of using said user feedback to update said user preference intent for said at least one relevance value uses a neural network methodology with back propagation.

11. A machine readable medium having stored thereon instructions that, when executed by a computer:

a) accepts search intent information from a user having a search intent;

b) creats a semantic taxonomy tree having at least one term representative of said search intent information;

c) augments said at least one term with at least one associated concept derived from said search intent information using existing terminological data;

d) associates a weight with at least one of said at least one term;

e) obtains user preference intent for at least one relevance value;

f) determines at least one root term for said at least one term;

g) transforms said semantic taxonomy tree to at least one Boolean search query;

h) submits at least one of said at least one Boolean search query to at least one searcher;

i) receives at least one search result from said at least one searcher;

j) interprets said at least one search result;

k) requests at least one page specified by said at least one search result;

l) receives at least one retrieved page;

m) generates ranked results by ranking said at least one retrieved page by applying at least one of said at least one relevance value and said search intent information to said at least one retrieved page;

n) presents said ranked results to said user;

o) presents said semantic taxonomy tree to said user;

p) accepts user feedback from said user; said user feedback indicating how well said search results addressed said search intent; and

q) uses said user feedback to update said user preference intent for said at least one relevance value.

12. A machine readable medium according to claim 11, wherein each term has an associated weighting factor.

13. A machine readable medium according to claim 11, wherein at least one of said at least one associated concept includes at least one synonymous concept.

14. A machine readable medium according to claim 11, wherein at least one of said at least one associated concept includes at least one antonymous concept.

15. A machine readable medium according to claim 11, wherein said at least one relevance value includes at least one of the following:

a) a composite component;

b) a semantic component;

c) a categorical match component;

d) a search engine component;

e) an authority/hub component; and

f) a popularity component.

16. A machine readable medium according to claim 11, wherein said at least one relevance value includes all of the following:

a) a composite component;

b) a semantic component;

c) a categorical match component;

d) a search engine component; and

e) a popularity component.

17. A machine readable medium according to claim 11, wherein said computer expands or narrows the presentation when said user clicks on nodes of said taxonomy tree.

18. A machine readable medium according to claim 11, wherein said at least one Boolean search query is formatted specifically for a preselected searcher.

19. A machine readable medium according to claim 11, wherein said page includes at least one of the following:

a) a web page;

b) a document;

c) an image;

d) an XML document;

e) a semantic web document; and

f) data.

20. A machine readable medium according to claim 11, wherein said computer further uses a neural network methodology with back propagation when said computer uses said user feedback to update said user preference intent for said at least one relevance value.

21. A search agent comprising:

a) a weighted semantic taxonomy tree elicitor capable of accepting search intent information from a user having a search intent;

b) a weighted semantic taxonomy tree capable of storing at least one term representative of said search intent information;

c) an ontology agent capable of deriving concepts from said at least one term using terminological data;

d) a search preference elicitor capable of receiving user preference intent for at least one relevance value;

e) at least one search preference elicitor database capable of storing said user preference intent;

f) a stemming agent capable of determining a root term from said search preference elicitor database;

a) A search agent according to claim 21, wherein each of said at least one term has an associated weighting factor.

23. A search agent according to claim 21, wherein said terminological data comes from an ontology engine.

24. A search agent according to claim 21, wherein said concepts include at least one synonymous concept.

25. A search agent according to claim 21, wherein said concepts includes at least one antonymous concept.

26. A search agent according to claim 21, wherein each of said at least one relevance value has an associated user-assigned weighting.

27. A search agent according to claim 21, wherein said at least one relevance value includes at least one of the following:
   a) a composite component;
   b) a semantic component;
   c) a categorical match component;
   d) a search engine component;
   e) an authority/hub component; and
   f) a popularity component.

28. A search agent according to claim 21, wherein said at least one relevance value includes all of the following:

a) a composite component;

b) a semantic component;

c) a categorical match component;

d) a search engine component; and

e) a popularity component.

29. A search agent according to claim 21, wherein said weighted semantic taxonomy tree elicitor, said search preference elicitor, and said presentation manager are integrated.

30. A search agent according to claim 21, wherein said weighted semantic taxonomy tree uses XML.

31. A search agent according to claim 21, wherein said at least one search preference elicitor database includes at least one of the following:

a) a personalized evaluation rule base;

b) search engine preferences base; and

c) a component preference base.

32. A search agent according to claim 21, wherein said stemming agent is capable of determining at least one said root term from said page request broker;

33. A search agent according to claim 21, wherein said presentation manager can expanded or narrow said presented weighted semantic taxonomy tree by clicking on nodes of said weighted semantic taxonomy tree.

34. A search agent according to claim 21, wherein said at least one boolean search query is formatted specifically for a preselected search engine.

35. A search agent according to claim 21, wherein said page request broker is capable of retrieving at least one retrieved page specified by said stemming agent.

36. A search agent according to claim 21, wherein said page includes at least one of the following:

    a) a web page;

    b) a document;

    c) an image;

    d) an XML document;

    e) a semantic web document; and

    f) data.

37.A search agent according to claim 21, wherein said user profile learning agent uses at least one neural network methodology with back propagation.